View metadata, citation and similar papers at core.ac.uk
brought to you by CORE
provided by Elsevier - Publisher Connector

not statistically significant, our results did show a trend in decreased LOS, readmission at 30 days, and use of antimicrobials. Use of IV IST were significantly decreased. Incorporation of clinical pharma should be strongly considered in this pt population.

446

Association Between Tacrolimus Levels and Outcomes after Allogeneic Hematopoietic Stem Cell Transplantation

Christina Carracedo [1], Laura Wiggins [2], Ashley Richards [2].
[1] University of Kentucky HealthCare, Lexington, KY; [2] UF Health Shands Hospital, Gainesville, FL

Graft-versus-host-disease (GVHD) is a life threatening complication of allogeneic hematopoietic stem cell transplantation (HSCT). The calcineurin inhibitor tacrolimus is commonly used in combination with other immunosuppressants to prevent GVHD; however the optimal serum target concentration for tacrolimus in this population remains unknown. A retrospective review was conducted to determine whether an association exists between tacrolimus concentrations and transplant-related outcomes, specifically acute GVHD, as well as the rate of renal toxicity and mortality. Data from 203 patients who underwent an allogeneic HSCT from a related (n=95) or unrelated (n=108) donor between January 1, 2003 and December 31, 2011 at a large academic hospital was analyzed. Sixty-two (31%) patients developed acute GVHD within the first 30 days following allogeneic stem cell transplant. Median tacrolimus concentrations at day 0, 7, 14, and 28 were 11.2, 13.8, 13.5 and 10.2 ng/mL, respectively among those who developed acute GVHD. Patients who did not develop acute GVHD had similar tacrolimus concentrations of 10.4, 13.1, 12.3 and 9.9 ng/mL for the same respective time points. Serum tacrolimus concentrations were similar across all grades of GVHD and there was no correlation between drug concentrations with respect to renal toxicity. Patients who developed renal dysfunction (n=18) had tacrolimus concentrations similar to the median concentration of the entire cohort, including those who did not experience renal toxicity. Overall mortality among the 203 included patients was 49%. Mortality was higher among patients who developed acute GVHD (55%) than in patients who did not experience the disease (47%). The results of this analysis support previous conclusions that tacrolimus blood concentrations are not associated with acute GVHD within the first 30 days post allogeneic HSCT.

447

Fosaprepitant for the Prevention of Nausea and Vomiting in Patients Receiving BEAM or High-Dose Melphalan Conditioning Regimens for Autologous Hematopoietic Stem Cell Transplantation

Stephen M. Clark [1,2], Lindsay Schaack [2], David DeRemer [1,2], Vamsi Kota [1], Amber Bradley Clemmons [1,2]. [1] Georgia Regents Medical Center, Augusta, GA; [2] University of Georgia College of Pharmacy, Augusta, GA

Chemotherapy-induced nausea and vomiting (CINV) occurs frequently during hematopoietic stem cell transplantation (HSCT) despite prophylactic therapy with serotonin antagonists and corticosteroids. Aprepitant, an oral neurokinin-1 (NK1) inhibitor, has been considered as add-on prophylactic therapy; however, to date no published studies have investigated the injectable NK1 inhibitor fosaprepitant (FOS) in HSCT. The purpose of this study is to assess the ability of FOS to reduce emesis after BEAM and high-dose melphalan autologous HSCT.

Table 1
Results Fosaprepitant vs. Control, Overall Assessment Period

	Control (n=70)	FOS (n=43)
No emesis (%)	65.7	81.4
Day(s) of melphalan (%)	98	99
Days 1-5 post-melphalan (%)	66	84
Complete response (%) (no emesis or breakthrough antiemetic use)	1.4	4.7
Emetic episode per patient (mean)	0.76	0.28
Breakthrough antiemetic doses per patient (mean)	9.6	9.98
Complete protection (%) (no emesis, breakthrough antiemetics, or significant nausea)	-	9.7*
No nausea (%) (<5 mm on 100 mm VAS)	-	16.1*
No significant nausea (%) (<25 mm on 100 mm VAS)	-	35.5*

*For 31 evaluable subjects

The use of a 150 mg fosaprepitant IV x 1 prior to melphalan became standard practice at our institution in the summer of 2012 for BEAM and high-dose melphalan regimens. We performed an IRB approved cohort study comparing patients who prospectively receive FOS to a historical cohort who did not receive FOS. The primary endpoint was overall percentage of patients with no emesis during the assessment period (first day of melphalan through five days after melphalan administration). Secondary endpoints include number of emetic episodes per patient, number of breakthrough antiemetic doses per patient, and complete response rate (no emesis or breakthrough antiemetic use). Patients in the FOS cohort also recorded nausea on a 100 mm visual analog scale (VAS) daily allowing for additional exploratory endpoints of complete protection rate (complete response plus no significant nausea), no significant nausea (< 25 mm on 100 mm VAS), and no nausea (< 5 mm on 100 mm VAS) to be assessed for that single cohort. A sample size of 70 patients per cohort was deemed necessary based on an estimated 40% no emesis in control group for 80% power at alpha=0.05 to detect a 25% absolute increase in patients with no emesis.

Seventy consecutive patients who received BEAM or high-dose melphalan without FOS were included in the historical cohort and 43 patients have received FOS in the prospective cohort. Interim results suggest the addition of FOS improved the percentage of patients with no emesis and the number of emetic episodes per patient. Exploratory endpoints in the FOS cohort which included patient reported nausea assessments on a VAS are encouraging as a third of patients reported no significant nausea during the overall assessment period. Based on these promising interim results, enrollment in the FOS cohort is ongoing.

448

Administration of Rabbit Anti-Thymocyte Globulin: Slowing Infusion Rate over a 4 Day Course with Aggressive Use of Pre-Medications May Decrease ATG Related Infusion Reactions

Amber Bradley Clemmons [1,2], Megan E. Hartranft [1,2], Vamsi Kota [1], Jeremy Pantin [1], Farrukh T. Awan [1], Huda Salman [1], Anand Jillella [1]. [1] Georgia Regents Medical Center, Augusta, GA; [2] University of Georgia College of Pharmacy, Augusta, GA

Anti-thymocyte globulin (ATG) during conditioning for allogeneic HSCT is often accompanied by infusion reactions;